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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,343	11/26/2003	Wim De Pauw	YOR920030415US1	8770

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EXAMINER	
CONTINO, PAUL F	
ART UNIT	PAPER NUMBER
2114	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/723,343	DE PAUW ET AL.	
	Examiner	Art Unit	
	Paul Contino	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,6,8,9,11-17,19,20,22,23 and 25-29* is/are rejected.

7)☒ Claim(s) *4,7,10,18,21 and 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION: Non-Final Rejection

Response to Arguments

1. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 5-6, 8-9, 11-17, 19-20, 22-23, and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avvari et al. (hereafter Avvari) (U.S. PGPub 2004/0025088) in view of Friedman et al. (hereafter Friedman) (U.S. PGPub 2002/0053043).

As in claims 1, 15, and 29, Avvari teaches a method, apparatus, and article of manufacture of problem determination in a distributed service-based application, comprising:

a memory and at least one processor coupled to the memory *(paragraphs [0082]-[0084])*, operable to:

obtain at least one testing result of the application through evaluation of at least one test group, wherein the test group comprises one or more test cases *(paragraph [0038])*; and

adaptively refine the at least one executed test group when the at least one testing result comprises at least one failure, to expose at least one problem that caused the at least one failure, wherein the step of adaptively refining the at least one executed test group comprises generating one or more new test cases *(paragraphs [0039] and [0075]-[0076])*.

However, Avvari fails to teach of test probes. Friedman teaches of test probes *(paragraph [0032])*.

It would have been obvious for a person skilled in the art at the time the invention was made to have included the test probes as taught by Friedman in the invention of Avvari. This would have been obvious because the use of test probes as taught by Friedman allows for the reception of test results, such as those resultant from the test cases of Avvari, in a Java environment common to both Avvari and Friedman, in order to diagnose and remedy a fault in an application *(Friedman: paragraph [0018])*.

As in claims 2 and 16, Avvari teaches of fixing at least one problem that caused at least one failure, when the cause of the at least one problem has been localized *(paragraph [0076]; bug fix)*.

As in claims 3 and 17, Avvari teaches of obtaining test results comprising the steps of:

generating a test group having at least one test case, from a general model of the application *(paragraphs [0038]-[0039])*;

executing the at least one test case of the test group of the application *(paragraph [0039])*;

passing the at least one result of the test group to an outcome analyzer *(Fig. 2 #114; paragraphs [0039]-[0041] and [0059], where the compare engine 114 is an outcome analyzer)*; and

verifying the at least one result against expected output at the outcome analyzer *(Fig. 2 #114; paragraphs [0039]-[0041] and [0059], where the compare engine 114 determines if the expected crash of the application has also been achieved by the test group)*.

As in claims 5 and 19, Friedman teaches of enabling one or more probes that return one or more testing results to an outcome analyzer *(paragraphs [0032], [0039], and [0046])*.

As in claims 6 and 20, Friedman teaches of enabling one or more additional probes that return one or more results relating to the at least one problem *(paragraph [0031])*; and

repeating the method of problem determination in a distributed service-based application *(paragraph [0032], where the problem determination method is repeated once the probes are enabled)*.

As in claims 8 and 22, Friedman teaches the one or more probes collect one or more intermediary results from the application *(paragraph [0032])*.

As in claims 9 and 23, Friedman teaches the one or more probes return one or more results relating to the functioning of the application *(paragraph [0032])*.

As in claims 11 and 25, Avvari teaches adaptively refining the at least one executed test group comprises:

adapting the test group to comprise at least one test case focused on the at least one problem *(paragraphs [0039]-[0040], where the new test cases are focused on the crash/problem)*; and

repeating the method of problem determination in a distributed service-based application *(paragraphs [0037]-[0039], where after a new test case is included in the test group, the test group is again executed in order to determine the crash/problem associated with the distributed service-based application)*.

As in claims 12 and 26, Avvari teaches the step of adapting the test group comprises the step of representing at least one action that correlates to the at least one failure in a model for generating the test group *(paragraphs [0037]-[0040], where the replication of test cases modeled from the application under test results in a representation of actions that parallel the application being tested)*.

As in claims 13 and 27, Avvari teaches the step of adapting the test group comprises the step of increasing coverage requirements for at least one state that correlates to the at least one failure in a model for generating the test group *(paragraph [0039], where the addition of new test cases increases the coverage as a result of a crash in the application under test not being paralleled by the test group)*.

As in claims 14 and 28, Avvari teaches the test group provides substantially complete coverage across the application *(paragraph [0039])*.

Allowable Subject Matter

3. Claims 4 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The limitations involving **marking each test case of a test group with a failure or success**, when read within the remainder of the limitations of the claims, including the base claims, make claims 4 and 18 allowable over the prior art.

4. Claims 7, 10, 21, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The limitations involving **disabling probes that return results not relating to the problem**, when read within the remainder of the limitations of the claims, including the base claims, make claims 7, 10, 21, and 24 allowable over the prior art.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. PGPub 2004/0068677 Briskey et al. discloses probe configuration.

U.S. PGPub 2005/0081082 Brodie et al. discloses probe dependencies.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Contino whose telephone number is (571) 272-3657. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PFC
7/11/2007

SCOTT BADERMAN
SUPERVISORY PATENT EXAMINER